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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,962	07/12/2006	Dirk Janssen	53182-320335	5406

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EXAMINER

PHILLIPS, HASSAN A

ART UNIT	PAPER NUMBER
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2451

NOTIFICATION DATE	DELIVERY MODE
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03/16/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/564,962	Applicant(s) JANSSEN ET AL.	
	Examiner HASSAN PHILLIPS	Art Unit 2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 18, 19, 23-27, 29 and 31-35 is/are rejected.
- 7) ☒ Claim(s) 17, 20-22, 28 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/26/08; 1/18/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to communications filed January 18, 2006.

Information Disclosure Statement

2. The information disclosure statements filed March 26, 2008 and January 18, 2006 have been received and considered by the examiner.

Specification

3. The amendments made to the specification filed January 18, 2006, have been received and considered by the examiner. The amendments are proper and have been entered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16, 18, 19, 23-27, 29, 31-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (AAPA) in view of Balasubramanian et al. (hereinafter Balasubramanian), U.S. Patent Pub. No. 2004/0141517.

6. In considering claim 16, AAPA discloses a method for transmitting data as Ethernet messages, in compliance with an Ethernet transmission protocol, on an Ethernet network having a baud rate, said method comprising the steps of: converting the data, during transmission, into a plurality of Ethernet messages, (pg. 3, lines 19-27); imposing a break time between transmission of each of the plurality of Ethernet messages, (pg. 3, lines 27-32); and transmitting each of said plurality of Ethernet messages sequentially, cyclically, and continuously, (pg. 3, lines 19-37).

Although the teachings of AAPA disclose substantial features of applicants claimed invention, they fail to expressly disclose: transmitting each of said plurality of Ethernet messages during a cycle having a cycle time.

Nevertheless, in analogous teachings, Balasubramanian discloses transmitting each of a plurality of Ethernet messages during a cycle (34) having a cycle time (36), (pg. 3, par. 0047).

Thus given the teachings of Balasubramanian, it would have been obvious to one of ordinary skill in the art to modify AAPA to expressly disclose transmitting each of said plurality of Ethernet messages during a cycle having a cycle time. As taught by Balasubramanian, this would have advantageously prevented race conditions and would provide for deterministic outcomes, (Balasubramanian , pg. 3, par. 0047).

7. In considering claims 18 and 29, the teachings of Balasubramanian suggest determining a size (66) of each of said plurality of Ethernet messages, (pg. 4, par.

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0059); adjusting the size of each of said plurality of Ethernet messages responsive to the cycle time, (pg. 4, par. 0059); and limiting the size of each of said plurality of Ethernet messages to ensure continuous and complete transmission of each of said plurality of Ethernet messages during the cycle, (pg. 3, par. 0053, pg. 4, par. 0069).

One of ordinary skill in the art would modify the teachings of AAPA with Balasubramanian for reasons previously indicated in considering claims 16 and 26.

8. In considering claim 19, the combined teachings of AAPA and Balasubramanian suggest wherein the step of adjusting the size of each of said plurality of Ethernet messages is further responsive to the baud rate of the Ethernet network (Balasubramanian, pg. 3, par. 0047), and wherein each of said plurality of Ethernet messages includes a start identifier, a preamble, a checksum, and a break time between transmissions, (AAPA, pg. 2, lines 4-16). One of ordinary skill in the art would modify the teachings of AAPA with Balasubramanian for reasons previously indicated in considering claim 16.

9. In considering claim 23, the teachings of Balasubramanian suggest aggregating said plurality of Ethernet messages into a transmission packet, (pg. 3, par. 0049, pg. 4, par. 0059); calculating a size of the transmission packet as an arithmetic total of a size of each of said plurality of Ethernet messages comprising the transmission packet, (pg. 3, par. 0049, pg. 4, par. 0059); and limiting the size of the transmission packet to a maximum permissible size, (pg. 3, par. 0049, pg. 4, par. 0059).

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One of ordinary skill in the art would modify the teachings of AAPA with Balasubramanian for reasons previously indicated in considering claim 16.

10. In considering claim 24, AAPA suggests aggregating said plurality of Ethernet messages into a transmission packet, (pg. 3, lines 32-37); storing the transmission packet in a buffer, (pg. 3, lines 32-37); and transmitting one or more transmission packets from the buffer after the buffer fills to a proscribed level, (pg. 2, lines 32-37).

11. In considering claims 25 and 33, the combined teachings of AAPA and Balasubramanian suggest assembling data into said plurality of Ethernet messages, (AAPA, pg. 3, lines 27-32); and synchronistically transmitting said plurality of Ethernet messages, Balasubramanian, pg. 3, par. 0048, pg. 4, par. 0059). One of ordinary skill in the art would modify the teachings of AAPA with Balasubramanian for reasons previously indicated in considering claims 16 and 26.

12. In considering claim 26, the claim recites substantially similar limitations to those presented in claim 16, and is separate only by its statutory category. Claim 26 is therefore rejected under the same rationale used in rejecting claim 16.

13. In considering claim 27, AAPA suggests wherein said means for transmitting said plurality of Ethernet messages comprises a transmission unit and the node further comprises means for controlling said transmission unit, (pg. 3, lines 19-37).

14. In considering claim 31, the teachings of Balasubramanian suggest determining a maximum permissible size of each of said plurality of Ethernet messages, (pg. 3, par. 0049, pg. 4, par. 0059). One of ordinary skill in the art would modify the teachings of AAPA with Balasubramanian for reasons previously indicated in considering claim 26.

15. In considering claim 32, AAPA suggests means for aggregating said plurality of Ethernet messages into a transmission packet, (pg. 3, lines 32-37); means for storing said transmission packet, (pg. 3, lines 32-37); and means for transmitting one or more transmission packets, (pg. 2, lines 32-37).

16. In considering claim 34, AAPA discloses an Ethernet network comprising: an Ethernet transmission link, (pg. 1, lines 10-21); a plurality of nodes connected to said Ethernet transmission link (pg. 1, lines 10-21), each of said plurality of nodes having a control unit including: means for converting data into a plurality of Ethernet messages, (pg. 3, lines 19-27); and means for transmitting said plurality of Ethernet messages sequentially, cyclically and continuously with a prescribed break time between transmissions, (pg. 3, lines 27-37); and a transmission channel for transmitting the plurality of Ethernet messages, (pg. 3, lines 32-37).

Although the teachings of AAPA disclose substantial features of applicants claimed invention, they fail to expressly disclose: transmitting each of said plurality of Ethernet messages during a cycle having a cycle time and without collision.

Nevertheless, in analogous teachings, Balasubramanian discloses transmitting each of a plurality of Ethernet messages during a cycle (34) having a cycle time (36), (pg. 3, par. 0047), and without collision, (pg. 3, par. 0053).

Thus given the teachings of Balasubramanian, it would have been obvious to one of ordinary skill in the art to modify AAPA to expressly disclose transmitting each of said plurality of Ethernet messages during a cycle having a cycle time and without collision. As taught by Balasubramanian, this would have advantageously prevented race conditions and would provide for deterministic outcomes, (Balasubramanian, pg. 3, par. 0047). Also this would have advantageously eliminated any delay caused by waiting for other competing transmission inherent in the Ethernet protocol, thereby allowing greater utilization of the bandwidth of an Ethernet network, (Balasubramanian, pg. 3, par. 0053).

17. In considering claim 35, AAPA suggests wherein said Ethernet transmission link comprises a ring-shaped topological arrangement and wherein said plurality of Ethernet messages are transmitted from one node to a next node, (pg. 1, lines 10-21).

Allowable Subject Matter

18. Claims 17, 20-22, 28, 30, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see PTO form 892.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASSAN PHILLIPS whose telephone number is (571)272-3940. The examiner can normally be reached on Mon-Fri (9am-6pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hassan Phillips/
Primary Examiner, Art Unit 2451